

# Additional weights of Venezuelan birds

by Betsy Trent Thomas

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Body weight, or mass, of birds is considered the most stable avian measurement (Smith *et al.* 1986), and the best measure of body size (Mueller 1986). Dunning (1984) points out that mean body weight has been applied to studies of avian physiology, ecology, morphology, community structure and theoretical modelling. Many museum specimens lack weight data because large collections were made before the importance of weight was known and prior to convenient equipment for taking field measurements. While most recent specimens in museums do contain mass data, collecting has slowed greatly (Parkes 1985). Thus one certain way that researchers can obtain weight data is through live bird captures.

This paper supplements a previous report on Venezuelan bird weights (Thomas 1982). Since then various publications have given many other weights of Neotropical birds: most tanager weights are given in Isler & Isler (1987); Faaborg (1985) gives data for 129 spp.; Moerman & Denslow (1985) for 82 spp.; Parker *et al.* (1985) for 35 spp.; Remsen (1985) for 92 spp.; Robbins *et al.* (1985) for 193 spp.; and Wiedenfeld *et al.* (1985) for 91 spp.; and Bates *et al.* (1989) for 189 species.

This paper gives 1156 weights of 123 spp. All measurements were taken between 1982 and 1985 in Venezuela from mist-netted birds. Birds were weighed, usually within 15 min of capture, on Pesola spring balances of 10, 50, 100 and 300 g and recorded to the nearest tenth of a gram for those <100 g, and to the nearest 5 g for those >100 g. Colour notes of soft parts were recorded and are available on request from the author. When samples exceed 7, the number, range, mean and standard deviations are given. Order and nomenclature follows Meyer de Schauensee & Phelps (1978).

Most birds were netted at Fundo Pecuario Masaguaral, Estado Guárico ( $08^{\circ}31'N$ ,  $67^{\circ}35'W$ —63 m a.s.l.). Other birds were from Los Anaucos, Estado Miranda ( $10^{\circ}20'N$ ,  $66^{\circ}50'W$ ) at 550 m. Small numbers of birds were netted in 3 other Venezuelan states; at the War Memorial of 1817, Estado Apure ( $07^{\circ}50'N$ ,  $68^{\circ}45'W$ ) at c. 50 m; at Km 118 on the Sta Elena road, Estado Bolívar ( $06^{\circ}01'N$ ,  $61^{\circ}25'W$ ) at c. 1500 m; and at Rancho Grande in Henri Pittier Park, Estado Aragua ( $10^{\circ}24'N$ ,  $67^{\circ}43'W$ ) at 1090 m.

Weights are from Masaguaral unless otherwise identified; others are from Los Anaucos (LA), Estado Apure (A), Estado Bolívar (B) and Henri Pittier Park (HP). All weights are in grams. \*North American migrants, \*\*Austral migrants.

*Eurypyga helias*: unsexed 188.0

*Jacana jacana*: 12 unsexed 89.5–137.0 ( $113.96 \pm 16.50$ )

*Vanellus chilensis*: 9 unsexed 225.0–284.0 ( $264.44 \pm 19.21$ )

\**Tringa solitaria*: 104 unsexed 31.1–65.1 ( $48.40 \pm 8.56$ ), March–May

\**Tringa flavipes*: unsexed 74.0 / 80.2 / 93.0, April

\**Actitis macularia*: 11 unsexed 32.9–46.0 ( $37.12 \pm 4.00$ ), April–May  
 \**Calidris minutilla*: 276 unsexed 16.0–34.0 ( $23.20 \pm 3.56$ ), March–April  
 \**Calidris fuscicollis*: 367 unsexed 27.5–45.7 ( $34.69 \pm 4.55$ ), April–May  
 \**Calidris melanotos*: unsexed 47.3 /54.5 /57.2, April  
 \**Calidris pusilla*: 19 unsexed 18.2–31.2 ( $24.46 \pm 3.82$ ), April–May  
 \**Micropalama himantopus*: unsexed 63.2, April  
 \**Tryngites subruficollis*: unsexed 38.1, April  
*Himantopus mexicanus*: 8 unsexed 144.0–168.0 ( $154.0 \pm 9.75$ )  
*Columba subvinacea*: unsexed 258.0  
*Zenaida auriculata*: unsexed 95.0 /101.0 /111.0 /114.0  
*Columbina talpacoti*: ♂ 50.5; ♀ 55.2  
*Scardafella squammata*: unsexed 53.0 /(A) 57.0 /58.5  
*Leptotila verreauxii*: unsexed 155.0 /156.0 /162.0 /(LA) 148.0  
*Forpus passerinus*: ♂♂ 24.0 /26.5  
*Brotogeris jugularis*: unsexed 53.5 /61.3  
 \*\**Coccycuza pumilus*: unsexed 33.2, April  
*Crotophaga sulcirostris*: unsexed 53.2 /57.3  
*Chaetura cinereiventris*: unsexed (B) 15.0 /(HP) 15.4  
*Reinarda squamata*: unsexed 10.0  
*Glaucis hirsuta*: (LA) 9 unsexed 5.9–7.9 ( $6.86 \pm 0.41$ )  
*Phaethornis bourcieri*: (B) unsexed 4.6  
*Phaethornis augusti*: (LA) unsexed 4.0 /4.2 /4.2 /4.7 /5.0 /5.0  
*Chlorostilbon mellisugus*: (LA) ♀ 2.8  
*Polytmus guainumbi*: ♀ 4.4  
*Amazilia fimbriata*: unsexed 5.1 /5.6 /(LA) 5.8  
*Heliodoxa xanthogonyx*: (B) ♂ 6.4  
*Coeligena coeligena*: (HP) unsexed 8.0  
*Galbulia ruficauda*: (LA) ♂♂ 22.5 /23.0; ♀♀ 21.4 /21.5 /22.1  
*Hypnelus ruficollis*: unsexed 40.8 /(LA) 44.8 /45.6  
*Picumnus squamulatus*: ♀ 9.9 /(LA) ♂ 11.0  
*Chrysopitius punctigula*: ♀♀ 65.5 /66.5 /(A) ♂ 71.0  
*Melanerpes rubricapillus*: ♀ 43.6  
*Veniliornis kirkii*: (LA) ♂ 30.5  
*Dendrocincla fuliginosa*: (LA) unsexed 37.1  
*Xiphorhynchus picus*: unsexed 40.2 /42.2 /42.5 /43.6 /44.0 /47.0  
*Xiphorhynchus guttatus*: (LA) unsexed 43.5 /46.0 /47.1 /48.2  
*Lepidocolaptes souleyetii*: (LA) unsexed 21.8  
*Campylorhamphus trochilirostris*: unsexed 42.0 /42.5 /43.8 /(LA) 33.7 /35.9  
*Synallaxis albescens*: unsexed 13.6 /(LA) 13.4 /14.1  
*Certhiaxis cinnamomea*: unsexed 15.3 /15.5 /15.6  
*Cranioleuca demissa*: (B) unsexed 14.9  
*Phacellodomus rufifrons*: unsexed 23.5 /23.6 /24.5 /24.7 /(LA) 25.5 /25.8  
*Taraba major*: (LA) ♀ 59.0  
*Thamnophilus doliatus*: (LA) ♂♂ 23.7 /24.8 /25.0 /25.0 /26.1; ♀♀ 23.8 /25.3 /(A) ♀ 27.4  
*Formicivora grisea*: (LA) ♂♂ 8.7 /9.0 /9.0 /9.4 /10.0 /10.1; ♀♀ 8.8 /8.8 /8.8 /8.9 /9.0  
*Myrmeciza longipes*: (LA) ♂♂ 23.9 /26.0 /26.7 /26.8; ♀ 25.3  
*Xenopsis albinucha*: (A) ♂ 10.2  
*Chiroxiphia lanceolata*: (LA) ♂ 17.9; ♀♀ 18.5 /19.8  
*Fluvicola pica*: ♂♂ 12.4 /12.7  
*Machetornis rixosus*: unsexed 30.1 /31.0 /32.0 /33.0  
*Tyrannus melancholicus*: unsexed 36.6 /37.0  
*Megarhynchus pitangua*: unsexed 58.5  
*Myiozetetes cayanensis*: unsexed 24.0 /25.4 /27.5 /29.5 /(A) 24.2 /27.4  
*Myiozetetes similis*: unsexed 22.3 /(A) ♀ 23.2  
*Conopias inornata* (= *Myiozetetes*): ♂♂ 27.0 /31.4 /32.5; ♀♀ 29.3 /30.1 /30.8; unsexed 25.5 /26.6 /27.1 /28.7 /(A) ♀ 26.0  
*Pitangus sulphuratus*: unsexed 65.0  
*Myiarchus ferox*: unsexed 26.0  
*Myiarchus tyrannulus*: unsexed 28.3  
*Cnemotriccus fuscatus*: (LA) 8 unsexed 10.8–12.9 ( $11.65 \pm 0.87$ )  
*Myiophobus fasciatus*: (LA) unsexed 8.2 /8.7 /9.6 /10.3 /10.5 /11.3  
*Tolmomyias flaviventris*: unsexed 11.1 /11.2 /11.5 /12.0 /12.0 /12.3 /(A) 12.0

*Todirostrum cinereum*: ♂ 7.1; ♀ 6.6 / (A) ♂ 7.0  
*Atalotriccus pilaris*: (LA) unsexed 5.8 / 8.2  
*Euscarthmus meloryphus*: (LA) unsexed 7.3  
*Inezia subflava*: unsexed 9.4 / (A) 7.5  
*Elaenia flavogaster*: unsexed 22.5 / 25.1  
\*\**Elaenia parvirostris*: unsexed 15.0, May  
*Sublegatus modestus*: (LA) unsexed 11.7 / 12.5  
*Phaeomyias murina*: (A) unsexed 12.4  
*Campstostoma obsoletum*: (LA) unsexed 7.8 / 8.3  
*Tachycineta albiventer*: unsexed 17.3  
*Progne chalybea*: unsexed 40.5  
*Notiochelidon cyanoleuca*: (HP) unsexed 9.3 / 9.4 / 9.5  
\**Riparia riparia*: unsexed 15.0, April  
\**Hirundo rustica*: unsexed 17.9, April  
*Campylorhynchus nuchalis*: unsexed 23.9  
*Thryothorus genibarbis*: (LA) unsexed 19.7 / 20.4 / 20.5 / 20.5 / 21.2 / 21.3 / 21.8  
*Thryothorus rutilus*: (LA) unsexed 15.5  
*Troglodytes aedon*: (LA) unsexed 12.0 / 13.3 / 13.4  
*Mimus gilvus*: unsexed 49.5 / 56.0  
*Catharus aurantiirostris*: (LA) unsexed 28.8  
\**Catharus fuscescens*: unsexed 44.4, May; (LA) 32.5, October  
*Turdus leucomelas*: (LA) unsexed 61.5  
*Turdus nudigenis*: unsexed 56.0 / 56.5 / 57.0 / 58.1 / 61.0 / (LA) 62.0 / 68.5  
*Polioptila plumbea*: (LA) ♂ 6.8  
*Cyclarhis gujanensis*: unsexed 25.4 / 31.6 / (LA) 24.5 / 24.5 / 25.0 / 25.2 / 26.7  
*Hylophilus aurantiifrons*: (LA) unsexed 8.0 / 8.5 / 9.1  
*Hylophilus flavipes*: (LA) unsexed 9.8 / (A) 10.0 / 11.4  
*Molothrus bonariensis*: 8 ♂♂ 45.0–61.0 (55.4 ± 5.35); ♀♀ 45.5 / 48.0 / (LA) ♀ 40.5  
*Cacicus cela*: unsexed 58.0 / 63.5  
*Quiscalus lugubris*: ♂♂ 73.4 / 77.8 / 81.0; ♀♀ 52.0 / 53.5 / 65.0  
*Agelaius icterocephalus*: ♂ 31.0 (immature plumage)  
*Icterus nigrogularis*: unsexed 35.9 / (A) 39.6 / 42.0  
*Gymnomystax mexicanus*: unsexed 82.5 / 92.5 / 94.0 / 95.5 / 100.0 / 106.5 / (LA) 102.0  
\*Dendroica petechia: unsexed 9.4, February  
\**Oporornis agilis*: unsexed 11.9, April  
*Coereba flaveola*: (LA) unsexed 9.2 / 9.4  
*Tersina viridis*: (HP) ♂♂ 26.0 / 27.8 / 28.4  
*Tangara cayana*: (LA) unsexed 19.5  
*Euphonia laniirostris*: (LA) ♀ 16.0  
*Thraupis glaucocolpa*: unsexed 31.0 / 33.5 / 36.5  
*Ramphocelus carbo*: (LA) ♂♂ 23.9 / 24.9  
*Tachyphonus rufus*: (LA) ♂♂ 30.0 / 30.8 / 32.0 / 33.3 / 34.4 / 34.5 / 35.0; ♀♀ 33.0 / 33.2 / 34.1 / 34.2 / 36.5  
*Rhodinicichla rosea*: (LA) ♂♂ 39.9 / 43.7 / 43.9; ♀♀ 37.8 / 39.4 / 40.6 / 42.9  
*Cyanocompsa brissonii* (= *cyanea*): (LA) ♂♂ 20.3 / 21.5; ♀♀ / 19.8 / 20.0 / 20.4 / 22.0  
*Saltator coerulescens*: (LA) unsexed 50.5 / 54.0 / 58.0 / 65.0  
*Saltator orenocensis*: (A) unsexed 33.3  
*Saltator albicollis*: (LA) unsexed 35.4 / 36.0 / 37.4 / 40.4 / 40.8 / 41.9 / 42.0  
*Paroaria gularis*: (A) unsexed 20.7  
*Coryphospingus pileatus*: ♂♂ 14.3 / 15.4 / (LA) ♂ 16.3  
*Arremonops conirostris*: (LA) unsexed 28.0 / 30.4 / 32.0 / 32.4  
*Arremon schlegeli*: (LA) unsexed 25.1 / 26.5 / 27.3 / 28.0  
*Sporophila intermedia*: ♀ 12.1 / (LA) ♂ 11.6 / (A) ♂♂ 10.9 / 11.8; ♀ 12.9  
\*\**Sporophila bouvronides*: (= *lineola*): (LA) ♂ 9.6, August  
*Sporophila nigricollis*: (LA) ♂ 9.8; ♀ 9.4  
*Volatinia jacarina*: (LA) ♀ 8.1  
*Sicalis flaveola*: ♂ 22.0; ♀ 20.4; unsexed 19.5 / (A) ♂ 20.1  
*Ammodramus humeralis*: (A) unsexed 14.5

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#### References:

Bates, J. M., Garvin, M. C., Schmitt, D. C. & Schmitt, C. G. 1989. Notes on bird distribution in northeastern Dpto. Santa Cruz, Bolivia, with 15 species new to Bolivia. *Bull. Brit. Orn. Cl.* 109: 236-244.

Dunning, J. B. 1984. Body weights of 686 species of North American birds. *Western Bird Banding Assoc. Monogr.* 1.

Faaborg, J. 1985. Ecological constraints on West Indian bird distributions. In *Neotropical Ornithology* (P. A. Buckley *et al.* Eds.) Ornith. Monog. No. 36. American Ornithologists' Union.

Isler, M. L. & Isler, P. R. 1987. *The Tanagers Natural History, Distribution and Identification*. Smithsonian Institution Press.

Meyer de Schauensee, R. & Phelps, W. H., Jr. 1978. *A Guide to the Birds of Venezuela*. Princeton University Press.

Moermond, T. C. & Denslow, J. S. 1985. Neotropical avian frugivores: patterns of behavior, morphology, and nutrition, with consequences for fruit selection. In *Neotropical Ornithology* (P. A. Buckley *et al.* Eds.) Ornith. Monog. No. 36. American Ornithologists' Union.

Mueller, H. C. 1986. The evolution of reversed sexual dimorphism in owls: an empirical analysis of possible selective factors. *Wilson Bull.* 98: 387-406.

Parker, T. A., III, Schulenberg, T. S., Graves, G. R. & Braun, M. J. 1985. The avifauna of the Huancabamba Region, northern Peru. In *Neotropical Ornithology* (P. A. Buckley *et al.* Eds.) Ornith. Monog. No. 36. American Ornithologists' Union.

Parkes, K. C. 1985. Neotropical ornithology—an overview. In *Neotropical Ornithology* (P. A. Buckley *et al.* Eds.) Ornith. Monog. No. 36. American Ornithologists' Union.

Remsen, J. V., Jr. 1985. Community organization and ecology of birds of high elevation humid forest of the Bolivian Andes. In *Neotropical Ornithology* (P. A. Buckley *et al.* Eds.) Ornith. Monog. No. 36. American Ornithologists' Union.

Robbins, M. B., Parker, T. A. III & Allen, S. E. 1985. The avifauna of Cerro Pirre, Darién, eastern Panama. In *Neotropical Ornithology* (P. A. Buckley *et al.* Eds.) Ornith. Monog. No. 36. American Ornithologists' Union.

Smith, J. N. M., Arcese, P. & Schluter, D. 1986. Song Sparrows grow and shrink with age. *Auk* 103: 210-212.

Thomas, B. T. 1982. Weights of some Venezuelan birds. *Bull. Brit. Orn. Cl.* 102: 48-52.

Wiedenfeld, D. A., Schulenberg, T. S. & Robbins, M. B. 1985. Birds of a tropical deciduous forest in extreme northwestern Peru. In *Neotropical Ornithology* (P. A. Buckley *et al.* Eds.) Ornith. Monog. No. 36. American Ornithologists' Union.

*Address:* Betsy Trent Thomas, Department of Zoological Research, National Zoological Park, Smithsonian Institution, Washington, D.C. 20008, U.S.A.

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## A new species of weaver from Tanzania

by N. E. & E. M. Baker

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During December 1986 a visit was made to the town of Ifakara ( $08^{\circ}08'S$ ,  $36^{\circ}40'E$ ) in Morogoro Region east central Tanzania. Although primarily a field trip for the Tanzanian Bird Atlas, attention had been drawn by Dr Eric Burnier to a species of weaver that was reasonably common in the area, but which he could not identify. Situated on the northern bank of the